



On-farm drainage system

GLOSSARY

Bioaccumulation—The process by which an individual organism concentrates a substance within its tissues to a level greater than that found in the surrounding environment.

Bioconcentration—The process by which a substance is passed up the food chain resulting in an especially high level of the substance at upper levels of the food chain.

Cogeneration—Process by which energy is extracted from the waste heat of an industrial process such as a steam boiler or food processing system.

Electrical conductivity (EC)—One way of measuring salinity of water, commonly expressed as millimhos per centimeter (mmho/cm) or deciSiemens per meter (dS/m), equivalent terms. EC can also be related to osmotic pressure, which influences the amount of water a plant's roots can extract from the soil. One mmho/cm or dS/m corresponds to about 640 ppm total dissolved solids.

Infiltration—The passage of water through the soil surface and into the soil.

Ion exchange unit—Device which selectively removes unwanted charged particles (ions) from solution by attracting the ions to an oppositely charged site in the unit.

Leach—To apply water in excess of a crop's needs for the purpose of flushing out salts from the root zone. The leaching requirement is the amount of water needed to pass through the root zone to prevent salinity in the soil from reaching levels which would reduce damage crop productivity.

Percolation—Movement of water down through the soil toward the water table (the level at which water stands in a well).

Potable—Suitable for drinking.

Reverse osmosis—Process for removing salts and other trace elements from water by forcing movement of fluid through a membrane designed to allow only fresh water to pass. Salts and trace elements are concentrated, reducing the volume for disposal but still presenting some environmental management challenges.

Salination—Process by which salts accumulate in soil.

Saline Soil—Soil affected by soluble salts.

Salts—All the minerals dissolved in water.

Selenium—Naturally-occurring inorganic element found primarily in soils, and to a lesser extent in water and air. Selenium is a necessary nutrient in very small amounts but can be toxic in high doses.

Solar ponds—System of saline ponds designed to extract energy from water when heated by the sun.

Subsurface drainage system—System of underground pipe to remove excess water accumulating below the soil surface which will not naturally percolate downward, out of the root zone.

Transpiration—Process by which plants release water vapor to the atmosphere through the pores of their leaves.

Volatilization—Process by which a substance is passed off as vapor, evaporation.